

REMARKS

Applicants concurrently file herewith a Petition for Extension of Time for a one-month extension of time, an Excess Claim Fee Payment Letter for one (1) excess claim, and corresponding fees.

Claims 1-21 are all the claims presently pending in the application. The previously pending claims have not been amended. Claims 20 and 21 have been added to claim additional features of the invention.

Claims 1-8 and 15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Iguchi et al. (U.S. Patent No. 6,270,596; hereinafter "Iguchi"). Claims 9-14 and 16-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Iguchi.

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention of exemplary claim 1 provides a steel for use in a high strength pinion shaft wherein the steel includes a 3-phase texture of ferrite + pearlite + bainite, (e.g., see Application at page 7, lines 13-24). These features are important for providing a steel for use in a high strength pinion shaft which is not refined and used by high frequency hardening, with less occurrence of peeling upon hobbing, having higher surface hardness and impact value and torsional strength after high frequency hardening, and with less heat treatment strains (see Application at page 5, lines 5-12).

II. PRIOR ART REFERENCE

The Examiner alleges that Iguchi teaches the claimed invention of claims 1-8 and 15. Furthermore, the Examiner alleges that the claimed invention of claims 9-14 and 16-19 would

have been obvious in view of Iguchi. Applicants submit, however, that Iguchi does not teach or suggest (nor make obvious) each and every feature of the claimed invention.

That is, Iguchi does not teach or suggest a steel for use in a high strength pinion shaft “*wherein the steel comprises a 3-phase texture of ferrite + pearlite + bainite*”, as recited in claim 1 and similarly recited in claims 5 and 9.

The Examiner attempts to rely on Steel 7 in Table 1 of Iguchi to support his allegation. The Examiner, however, is clearly incorrect.

That is, nowhere in this table (nor anywhere else for that matter) does Iguchi teach or suggest a steel for use in a high strength pinion shaft wherein the steel includes a 3-phase texture of ferrite + pearlite + bainite. Indeed, the Examiner does not even allege that Iguchi teaches or suggests these features.

The Examiner alleges that “while Iguchi et al. does not disclose that the steel comprises a three-phase texture of ferrite + pearlite + bainite, such would be expected since: 1. The steel composition is the same as the instant claimed invention as discussed in the 12/8/2006 office action, and 2. The processing step includes heating during rolling or forging up to a temperature of 1050°C (col. 5, lines 1-6) which examiner asserts is the same of substantially similar to the process disclosed by the instant invention” (see Office Action dated August 15, 2006 at page 5). The Examiner, however, is clearly incorrect.

That is, Applicants submit that the claimed invention would not be expected from the teachings of Iguchi because Iguchi does not disclose the same, or substantially the same, process disclosed in the Application.

Indeed, as pointed out by the Examiner, Iguchi teaches heating during rolling or forging up to a temperature of 1050°C.

In stark contrast, the Application teaches that the steel is hot rolled under specific conditions. That is, the steel is hot rolled at a temperature of 850°C or lower, and preferably

between 700°C and 850°C, and with a draft ratio of 10% or more. The specific process limitations are important to the claimed invention because the tissue is refined when the rolling temperature is low and the draft ratio is large (e.g., see Application at page 20, lines 9-21).

Iguchi does not teaching hot rolling the steel in accordance with the specific process described in the Application. Thus, there is no evidence to support the Examiner's allegation that the claimed invention would have been expected from the teachings of Iguchi.

Therefore, Applicants submit that Iguchi does not teach or suggest each and every feature of the claimed invention. Therefore, the Examiner is respectfully requested to reconsider and withdraw this rejection.

III. NEW CLAIMS

New claims 20 and 21 have been added to provide more varied protection for the claimed invention and to claim additional features of the invention. These claims are independently patentable because of the novel features recited therein.

Specifically, all of the examples shown in Table 1 of Iguchi include Cr, Cu, Ni and Al. Thus, the limitation recited in exemplary dependent claim 20 of the present invention is not taught or suggested by Iguchi.

Additionally, none of the examples disclosed in Iguchi exhibit an f value equal to or lower than 0.50. Thus, the limitation recited in exemplary dependent claim 21 of the present invention is not taught or suggested by Iguchi.

Applicants submit that new claims 20 and 21 are patentable over any combination of the applied references at least for analogous reasons to those set forth above with respect to claims 1-19.

IV. FORMAL MATTERS AND CONCLUSION


In view of the foregoing, Applicants submit that claims 1-21, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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